

Notice of Allowability

Application No.

09/807,634

Examiner

Eric M Williams

Applicant(s)

KERR, JOHN HUGH

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the papers filed 03/22/2004.
2. ☒ The allowed claim(s) is/are 1,4-7 and 16-24.
3. ☒ The drawings filed on 22 March 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 03/23/2004 .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Robin W. Asher on 04-23-2004.
3. The application has been amended as follows:

SPECIFICATION:

- 1.) On page 12 the second full sentence of the 4th full paragraph between the word variator the word shown, the following was added – PAV1 -- .
- 2.) On page 13 the first sentence of the 4th full paragraph after the word variator and before the comma that follows, the following was added – (PAV1a) – .
- 3.) On page 13 the fourth sentence of the 4th full paragraph after the word variator and before the comma that follows, the following was added – (PAV1b) – .
- 4.) On page 14 in the first sentence of the 1st full paragraph after the word variator, the following was added – (PAV2) -- .
- 5.) On page 14 the first sentence of the 3rd full paragraph after 13b, the following was added – (PAV3) -- .
- 6.) On page 14 the first sentence of the 4th full paragraph after the word variator, the following was added – (PAV4) -- .

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CLAIMS:

- 1.) In claim 16 line 14, after "second tubular friction" the word – surface – was added.
- 2.) In claim 19, line 10, the word "ration" was changed to – ratio –.
- 3.) In claim 19 line 11, after the word "of" the word – said – was added.

Reasons for Allowance

3. Claims 1, 4-7 and 16-24 are allowed.
4. The following is an examiner's statement of reasons for allowance:

With respect to claim 1, the available prior art does not anticipate nor render obvious an infinitely variable transmission comprising a rotational input member, a rotational output member, a pair of variable velocity ratio gear sets, a multi-directional coupling associated with the gear sets, an actuator associated with the coupling for coupling the gear sets to the rotational members over a common angular period for providing a uniform velocity ratio between the rotational members over the angular period, a phase angle variator for varying a rotational angular displacement between the gear sets for varying the uniform velocity ratio, and the actuator comprising a pair of shadow cams coupled to one of the rotational members, wherein each of the shadow cams is synchronized with a respective one of the gear sets for altering a coupling state of the coupling.

With respect to claim 16, the available prior art does not anticipate nor render obvious an infinitely variable transmission comprising a rotational input member, a rotational output member, a pair of variable velocity ratio gear sets, a multi-directional

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coupling associated with the gear sets, an actuator associated with the coupling for coupling the gear sets to the rotational members over a common angular period for providing a uniform velocity ration between the rotational members over the angular period, a phase angle variator for varying a rotational angular displacement between the gear sets for varying the uniform velocity ratio, and the multi-directional coupling comprises a race including a first tubular friction surface, a tubular member including a first bearing surface, a tubular slipper including a second tubular friction surface, a second bearing surface opposite the second friction surface, the second bearing surface and the first bearing surface defining a channel therebetween, and a plurality of roller elements disposed in the channel, and the actuator is configured to prevent rotational movement of the slipper relative to the tubular member over the angular period.

With respect to claim 19, the available prior art does not anticipate nor render obvious an infinitely variable transmission comprising a rotational input member, a rotational output member, a pair of variable velocity ratio gear sets, a multi-directional coupling associated with the gear sets, an actuator associated with the coupling for coupling the gear sets to the rotational members over a common angular period for providing a uniform velocity ration between the rotational members over the angular period, a phase angle variator for varying a rotational angular displacement between the gear sets for varying the uniform velocity ratio, wherein the variable velocity-ratio gear sets are coupled to one of said rotational members, and the transmission includes a

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torque-splitter coupled to the other of the rotational members for conveying torque between the gear sets and the other rotational member.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M Williams whose telephone number is 703-305-0607. The examiner can normally be reached on Mon. - Fri. from 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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